

NY Ser: OUTBURST ACTIVITY AND MULTIPERIODIC PROCESSES IN ITS VARIOUS STAGES DURING 2014 AND 2016

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Results from observation campaigns for the dwarf nova NY Ser during 2014 and 2016 are presented. Data were obtained on a total of 126 nights in 2014 that include 20 normal outbursts and one superoutburst and on 22 nights in 2016 that include 5 normal outbursts. The shape of the curves for the normal outbursts indicated the existence of “outside-in” and “inside-out” outbursts in this system. In different stages of outburst activity (quiescent state, outburst, and superoutburst) NY Ser manifests brightness oscillations with different periods. In the quiescent state and in normal outbursts, the orbital period $0^d.097558(6)$ predominated. During the superoutburst we identified two stages in the evolution of superhumps: a stage in which the tidal instability of the accretion disk increases (A) and a stage with developed superhumps (B). Stage A for NY Ser has been identified for the first time, but its duration and period are not uniquely determined. In stage B, positive superhumps with an average period of $0^d.10464(9)$ and a period excess of $\varepsilon = 0.072$ were recorded and negative superhumps with an average period of $0^d.0938(1)$ and a period deficit of $\varepsilon = -0.038$ were detected for the first time.

Keywords: NY Ser: cataclysmic variables: negative superhumps: evolution of superhumps: accretion

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